

REMARKS

In the Final Office Action¹, the Examiner rejected claims 1-16 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,729,694 to Holzrichter et al. ("Holzrichter") in view of U.S. Patent No. 4,654,883 to Iwata ("Iwata").

By this amendment, Applicants have amended claims 2-4, 11-13, and 15, cancelled claim 1 without prejudice or disclaimer of its subject matter, and added new claims 17-20. Claims 2-20 remain pending and under current examination.

I. Summary of Examiner Interview

Applicants' representative conducted an interview with the Examiner Lao on February 1, 2008. During the interview, Applicants' representative discussed the present invention and a proposal which would add new claims 17-19.

In particular, Applicants' representative explained that the present invention is directed to a communication device for sampling non-audible sounds by using vibrations transmitted through soft tissue. Further, Applicants' representative discussed the aspect of the invention, as recited in new claim 17, as a device comprising a positioning structure coupled to a microphone, where the positioning structure positions the microphone on a surface of skin at a particular location, namely, over a sternocleidomastoid muscle below a mastoid of the person, so as to detect non-audible vibrations transmitted through flesh of the person. Thus, the present invention is significantly different from the prior art, such as Iwata, which senses vibrations conducted through bone tissue.

¹ The Final Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement of characterization in the Final Office Action.

Applicants' representative also discussed the aspect of the invention, as recited in new claim 18, as a device in which an adhesive diaphragm on skin cooperates with a suction member to create a chamber and to conduct vibrations from the soft tissue through the diaphragm into the chamber, the device having a microphone attached to the suction member to detect the vibrations in the chamber.

During the interview, the Examiner asserted that known devices, such as an EKG system, have a similar structure. However, Applicants' representative explained to the Examiner that systems such as EKG systems are significantly different, in that they may use a suction member and/or an adhesive member to maintain an electrode in physical and electrical contact with skin. Such systems do not have a "diaphragm," a "suction member," and a "microphone" cooperating in the specific manner recited in claim 18.

Further, the Examiner indicated that he had discussed the proposed new claims with his supervising Primary Examiner and that the two examiners believed the term "non-audible" recited in claims 17-19 was inconsistent with the definition of the word "sounds." Applicants' representative disagreed with the Examiner, and explained that "non-audible" means "not capable of being heard," and that "sounds" means "acoustic vibrations." Thus, the two terms are not inconsistent. Indeed, many "sounds" are not capable of being heard, such as sub-sonic and ultra-sonic acoustic vibrations. Even though such sounds cannot be detected by a human ear, they are nevertheless, sounds. Similarly, vibrations transmitted only through soft tissue are also "non-audible sounds."

At the conclusion of the interview, the Examiner stated that he would consider the claims further, but only if they were submitted together with a Request for Continued Examination (RCE).

II. Rejection under 35 U.S.C. § 103(a)

Applicants respectfully traverse the Examiner's rejection of claims 1-16 under 35 U.S.C. § 103(a) as being unpatentable over Holzrichter in view of Iwata. A *prima facie* case of obviousness has not been established. Claim 1 has been cancelled, therefore, the rejection of claim 1 is moot. Thus, the following discussion will be directed to new independent claims 17-19 and dependent claims 2-16 and 20, in view of the prior art references.

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. See *M.P.E.P.* § 2142, 8th Ed., Rev. 6 (Sept. 2007). "A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention." *M.P.E.P.* § 2145. Furthermore, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" at the time the invention was made. *M.P.E.P.* § 2143.01 (III), *internal citation omitted*. Moreover, "[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole

would have been obvious.” *M.P.E.P.* § 2141.02(1), internal citations omitted (emphasis in original).

“[T]he framework for objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q 459 (1966).... The factual inquiries ... [include determining the scope and content of the prior art and] ... [a]scertaining the differences between the claimed invention and the prior art.” *M.P.E.P.* § 2141(11). “Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” *M.P.E.P.* § 2141(111).

A. New Independent Claim 17

New independent claim 17 calls for a device for sampling “non-audible sounds” that comprises a “microphone” and a “positioning structure coupled to the microphone, the positioning structure positioning the microphone on a surface of skin over a sternocleidomastoid muscle below a mastoid of the person so as to detect non-audible vibrations transmitted through flesh of the person and conducted through the skin” (emphasis added). The prior art does not teach or suggest at least these elements of claim 17.

The Examiner correctly states that “Holzrichter fail[s] to teach” the claimed “microphone being installed on a surface of the skin on the sternocleidomastoid muscle immediately below the mastoid of the skull, that is, in the lower part of the skin behind the auricle.” See Final Office Action, page 3. The Examiner relies on Iwata to allegedly disclose these elements. This is not correct.

The Examiner states that Iwata “teaches that the position of microphone 17 is slidably adjustable along the back of the ear (retaining mechanism 13/16, col. 3, lines 6-29).” Final Office Action, page 3. The Examiner further alleges that since the position of the microphone 17 can be adjusted within a certain range, attaching the microphone right below the mastoid can be realized. See Final Office Action, page 3. However, this is not correct. Iwata does not teach that a microphone can be moved, as the Examiner suggest.

Iwata discloses that “The other end of a sliding rod 16, on one end of which is mounted a bone transmission type microphone 17, is slidably retained on the other retainer member 13. A locking piece 18 to be hooked on the upper portion of the ear is projected on the bone transmission type microphone 17.” Iwata, Col. 3, lines 16-21 emphasis added. Thus, Iwata implies that when using the bone transmission type microphone 17, the microphone is fixed at the side head with the locking piece 18 hung on the ear. Therefore, according to Iwata, as shown in Figures 1 and 2, the bone transmission type microphone 17 and the locking piece 18 are integrated to be fixed to the sliding rod 16; hence, with the locking piece 18 hung on the ear, the bone transmission type microphone 17 cannot be moved downward to be mounted just below the mastoid. Moreover, there is no suggestion or motivation in Iwata to change the shapes of retaining member 13, sliding rod 16, microphone 17, or locking piece 18, to enable sliding the microphone just below the mastoid. Further, there is no recognition in Iwata of the problem to be solved, as claimed in the specification of this application.

For at least these reasons, the disclosure of Iwata does not teach a device for sampling “non-audible sounds” that comprises a “microphone” and a “positioning

structure coupled to the microphone, the positioning structure positioning the microphone on a surface of skin over a sternocleidomastoid muscle below a mastoid of the person so as to detect non-audible vibrations transmitted through flesh of the person and conducted through the skin,” as recited in claim 17 (emphasis added).

Further, as discussed above and during the interview, claim 17 calls for a communication device for sampling “non-audible sounds” by using vibrations “transmitted through flesh of the person and conducted through the skin” (emphasis added). In contrast, Iwata, senses vibrations conducted through bone tissue.

B. New Independent Claim 18

New independent claim 18 calls for a device for sampling “non-audible sounds” comprising a “diaphragm having an adhesive surface for adhesive attachment to skin of the person” a “suction member removably attached to the diaphragm so as to form a chamber interior of the suction member and the diaphragm,” and “a microphone attached to the suction member and disposed so as to generate electrical signals corresponding to vibrations induced in the chamber by vibrations transmitted through the diaphragm from the skin.” The prior art does not teach or suggest at least these elements of claim 18.

C. New Independent Claim 19

New independent claim 19, although of different scope, contains elements similar to those highlighted above for claim 17 and, therefore, is also allowable over the prior art of record. For example, the prior art does not disclose or suggest a method for detecting “non-audible sounds” comprising “attaching a microphone on a surface of skin over a sternocleidomastoid muscle below a mastoid of the person” and “generating an

electrical signal from the microphone corresponding to vibrations generated by the person and conducted through the skin," as recited in claim 19.

D. Conclusion

In view of the mischaracterization of the Iwata reference, above, the Final Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of claims 17-19. Moreover, there is no motivation for one of ordinary skill in the art to modify the references to achieve the claimed combinations. Thus, the Examiner has failed to clearly articulate a reason why claims 17-19 would have been obvious to one of ordinary skill in the art in view of the prior art. Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claims 17-19 and the rejection under 35 U.S.C. § 103(a) must be withdrawn. In addition, dependent claims 2-16 and 20 are also allowable over the prior art at least due to their dependence from claim 17.

III. Conclusion

In view of the foregoing amendments and remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

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By:  #27432
for  Arthur S. Garrett
Reg. No. 20,338